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Bachelor Thesis

Metaverse Seoul and New York:
A Comparative Discourse Analysis

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Abstract

This thesis examines the differences between two metaverse city discourses. Urban environments are going to be the most important areas for solving problems on a global scale, as an increasing percentage of people on Earth live in cities. The smart city discourse is increasingly steering towards the solution to all problems and so is its new form of the metaverse city. The metaverse city discourse is coming from novel technologies of the fourth industrial revolution, receiving significant scholarly optimism. By performing a comparative critical discourse analysis, the metaverse city discourses of frontrunners New York and Seoul will be laid out, after which they will be compared. Results have shown that the ideologies around the metaverse city discourse differ greatly. Where Seoul's discourse is marked by the presence of government control with an urban service delivery-focused ideology, New York's corporate context drives a discourse arena marked by corporate pluralism with neoliberal ideologies that live freely due to a lack of governance. Both techno-optimistic rhetorics are countered by minor actors from the media or civilians, as they question the power of big tech companies and tax-money investments, but these ideologies do not prevail in the discourse.

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1. Introduction

1.1 Background and State of the Art

Smart city discourses are an increasingly important phenomenon in urban governance (Haarstad, 2017), and recent industrial and technological revolutions bring the appearance of Metaverse city discourses. According to Bär et al. (2020), this comes together with neoliberal hegemonic discourses from the 'big tech' companies, that shape techno-optimistic ideologies. So far, scholars have highlighted the vast range of social (Bibri, 2022), educational (Kusuma & Supangkat, 2022), and governing applicability's (Allam et al., 2022; Bibri, 2022; Kusuma & Supangkat, 2022) that implementation of a metaverse in the social system can have. Studies also seem to describe the future as metaverse-oriented (Bibri, 2022; Kusuma & Supangkat, 2022) and the present stage is enacting a 'new normal' that combines virtuality with urbanity (Allam et al., 2022). Overall, Allam et al. (2022) and Bibri (2022) argue the metaverse to increase the efficiency and accessibility of public service delivery.

An argument in favour of this ongoing transformation is the fact that several (global) cities are actively in some stage of implementing the metaverse into the public sector (Allam et al., 2022; Ibrahim, 2022; Thomson, 2023), while some suggest the presence of a race to be the pioneering city (Kusuma & Supangkat, 2022). Frontrunners in the metaverse-investing race are Seoul (Allam et al., 2022; Kusuma & Supangkat, 2022; Thomson, 2023) and New York (Ibrahim, 2022; Thomson, 2023). Widescale investment into the adaptation of the metaverse is happening, all the while neo-liberal ideologies are perceived to shape global technology discourses, and an increased data- and algorithm-driven platformized urban society, fuelled by surveillance capitalism. Several scholars contradict these discourses with critical rhetorics. Keskin (2018) calls out their disability to safeguard democratic norms, while Bibri (2022) emphasises questioning the desirability of "data-driven corporate-led technocratic governance", on which Allam et al. (2022) contribute that this governance style serves the agendas of tech giants, especially when considering the historical context of the big tech's efforts at privacy protection.

Considering the existing research on smart city and metaverse city discourses, it is of great interest to analyse the actual expression of technocratic hegemonic discourses, and the power relations they imply. These metaverse city discourses around the cities of Seoul and New York are expected to differ significantly, due to the differing contexts in which they are embedded, which is responsible for different stakeholders exerting power over public debate and overall discourse variety and prevalence. The wide-scale adaptation of the metaverse, however, already shows that the metaverse city discourse is somehow a dominant vision of the future of the smart city concept.

Thus, existing scientific debate is mostly optimistic about the metaverse for urbanism and cities are already in a variety of stages of implementation. Still, there exists a knowledge gap that exposes the

discourses and the actors that exert power over their shaping. Comparative discourse analysis of smart cities exist but have not yet tackled discourses behind the novel phenomenon of the metaverse city. It adds to the debate knowledge for urban policymakers and the scientific community, about how the metaverse city discourse comes to expression in different urban contexts. Discourse theory assumes that narrative is behind the shaping of the different social worlds (Given, 2008). Thus explicitly, the research gap is in clarifying the differences in rhetoric behind metaverse cities, which are responsible for different social worlds. The goal of this research is to explain these differences in metaverse city discourses, by looking critically at the shaping, (de)legitimizing and hegemonizing of metaverse city discourses, between two major 'metaverse cities to be' New York and Seoul. Societal implications of an increasingly urbanized world (Ritchie et al., 2024) and the techno-optimistic vision to solve those issues, make this research valuable. moreover, the scientific community, as well as (municipal) governmental agencies can profit from the results since it is supposed to expose at first sight less apparent (imbalanced) power relations and issues that would otherwise be lost in the multiplicity of framing from both public and private stakeholders.

1.2 Research Questions

To critically compare metaverse city discourses of two major global cities, is a novel research design within the area of smart city discourse research. The research question that will guide this research is designed to find knowledge on the players shaping ideologies, and to what extent they exert power over others resulting in a particular hegemonic discourse. These power dynamics, as is assumed from CDA theory (Given, 2008), will change the outcome of the social world. In this case mainly the shaping of urban metaverse policy strategies. A descriptive research question and three sub-questions are used for analysis. The research question is:

> *'How can differences in the discourses on metaverse smart city governance in New York and Seoul be explained?'*

This question is of great importance because there is not yet an extensive overview that explains who shapes the metaverse city discourse and how the key actors try to make their ideologies prevail over others while battling for a hegemonic status of their discourse. More importantly, as actors try to push their interests forward, urban governance needs to be informed about the desirability of dominance of this interest. Then also, how are these aspects different between New York and Seoul. It is, however, of great interest to discover how these differences have formed, which is probably due to contextual differences. Contextual differences will become apparent during the discourse analysis. To answer the research question, three sub-questions will be studied in the logical order which is stated below:

> *SQ_1: What are the discourses of using the metaverse in smart city governance in Seoul?*

> *SQ_2: What are the discourses of using the metaverse in smart city governance in New York?*

SQ₃: To what extent do the discourses of New York and Seoul differ in terms of ideological legitimation?

These sub-questions are designed to first understand the (hegemonic) discourses of both cities separately, which is important since these discourses have not yet been academically studied. For example, dominant tech giants like Meta (Facebook) could shape the narrative towards technocratic ideologies in New York, while in Seoul Samsung's historical and cultural influence might shape hegemonic discourse. Afterwards, the discourses will be contrasted against each other to explain their differences in shaping hegemonic discourses and their different social outcomes. The thesis will perform a discourse analysis to depict the discourse around the phenomenon of implementing the metaverse in smart city governance within the selected cases.

1.3 Research Approach

The linguistic aspects of discourses are assumed to alter social reality. Thus, behind what most people observe about the metaverse and its public policy strategies, are linguistic/rhetoric operations by several actors who attempt to exert power to influence this social outcome. This thesis will interpret elements of these narratives from actors present in the metaverse city discourse, to uncover ideological elements that are employed to exert power, in the context of metaverse city policies of New York and Seoul. Gathering those insights requires the qualitative research method of critical discourse analysis (CDA). Discourse scholars assume that any form of language entails some form of meaning-making, used to convince individuals and groups of a certain ideology. CDA is assumed to work best around a specific social problem (public implementation of the Metaverse) and is critical towards the legitimizations of ideologies and (unequal) power relations that are behind discourses concerning these problems (Given, 2008).

These elements of the discourses as observable objects will be depicted from a variety of textual documents, from both private and public sources, by using coding software. Further specified in the methodology section of this paper, these sources include, but are not limited to public policy strategy documents and private companies' metaverse city corporate documents. This paper will continue by clarifying the theoretical framework that is laid out by previous research, about the development of smart city models, and the metaverse as a new model of smart cities resulting from an industrial revolution.

2 Theory

2.1 Introduction

This research is designed to uncover the major discursive differences between two metaverse city discourse pioneers. With a critical analysis, these rhetorics will expose the implications of power and control, as well as the ideology and hegemony they manifest. According to SAGE, discourses are "any instance of signification, or meaning-making, whether through oral or written language or nonverbal means." (Given, 2008, p. 174). Besides, this thesis regards discourses as forming "the objects of which they speak" (Haarstad, 2017, p. 4). This stems from the idea that every form of linguistic data, is in relation to the context in which it is embedded and is also a means of constructing social reality (Given, 2008). It is important to study discourse since they are responsible for shaping reality. To put theory on discourse into a practical sense for this study, a metaverse city discourse is then: the collective of meaning-making through communications concerned with the implementation and integration of the metaverse in an urban governance context. Just as the metaverse itself is created by interconnecting previously available smart technologies, the metaverse city discourse is an upgraded version of existing smart city discourses. The coming chapter will provide theory to the research question '*How can differences in the discourses on metaverse smart city governance in New York and Seoul be explained?'*, by giving step-by-step, oversights on the scholarly discussions around the key concepts of the thesis. The chapter is constructed in an order that theoretically explains the phenomenon of Metaverse city discourse evolution, similar to the object of study in the research question. It will therefore start by explaining more carefully, discourses and their underlying processes, the evolution of smart city discourse, and its continuous process toward a metaverse city discourse. Afterwards, the variety of metaverse discourse will be discussed. Finally, the chapter will conclude with a summary of the theoretical framework, which will function as the foundation on which analysis will be performed.

2.2 Smart City Discourse

Discourses are ideological in essence and are loaded with implications of power and control. Discourses as ideologies means that it is an interpretation of symbols of linguistic rhetoric (Bär et al., 2020), and interpretation is influenced by one's beliefs and values. A shared interpretation of these linguistic symbols forms ideologies (Bär et al., 2020). Legitimization of these ideologies is done by exerting power in the ideology-shaping arena, to make it prevail over other ideologies, making it an hegemonic one. Prevailing ideologies are mainly elitist, and prevalence often is a result of imbalanced power dynamics. Power and hegemony, then, allow for following interests connected to these 'elitist' interests (Brand, 2005), which do not have to be in the best interest of the general public, but most likely follow a neoliberal narrative that characterises big tech visions. In general, academic smart city discourse frames the smart city concept as a "framework consisting mainly of information and communication technologies (ICT)" (Chen et al., 2024, p. 2) and emphasises its potential "towards enhancing

convenience and the efficient management of city areas through innovation." (Chen et al., 2024, p.1). The Smart city policy discourse is surrounded by positive associations and a neo-liberal ideology and the implementation of smart city concepts is justified by techno-optimistic rhetoric (Bär et al., 2020).

The smart city discourse started in 2008 as smart city 1.0, when ICT companies like IBM attempted to market their products for urban governance (J. Park & Yoo, 2023). Hegemonic discourse stemming from the private sector characterises this stage, as smart technologies were invested in by urban governments, without an acknowledgement of the necessity thereof (Makieła et al., 2022). Capitalistic tendencies were conveyed by corporate storytelling instances (Haarstad, 2017), thereby framing a problem which the technologies would solve (J. Park & Yoo, 2023). Since then, the discourse also entered academic domains, and some scholars labelled it an empty signifier: "a concept virtually void of any substantive meaning" (Haarstad, 2017, p. 2). This emptiness allows for social groups to put meaning to it, as fits their interests (Haarstad, 2017).

Critical arguments arose on the 1.0 discourse's technocratic and goalless understanding of a smart city, where technologies were implemented as an end rather than a means to solve a problem. Moreover, the unequal bias of its benefits prompted a new smart city strategy, often named 'Smart city 2.0' with an increased focus on governance, increasing citizen's quality of life and solving social problems, which the first model failed to address (J. Park & Yoo, 2023). Discourse then progressed towards a 3.0 model, characterized firstly by increasing citizen participation, with more citizen control over technologies, dialogue and deliberation. Secondly, a scope expansion of applications to include equity, educational and ecological issues. Thirdly, this model facilitates the sharing economy (Makieła et al., 2022).

Currently, scholars perceive the academic discourse to be moving towards a transition into a Smart City 4.0 model, related to industry 4.0 (Yigitcanlar et al., 2023), which brings technologies like Artificial Intelligence (AI), robots and the Internet of Things (IoT). Related is an increased focus within the policy discourse, on Sustainable Development Goals (SDGs) (Makieła et al., 2022), and general narrative expressing fear of the power of the IT giants. Moreover, smart cities are seen as a panacea for all problems related to increased urbanisation and fear of pseudo-urbanisation (J. Park & Yoo, 2023). That the smart city 4.0 discourse progressed towards a metaverse city discourse, raises questions about its origin and prevalence. As Bär et al. (2020) argue, one cannot just speak of an evolution, but rather something created by certain power structures connected to capitalism, sustained by prevailing ideologies and hegemonic discourses.

2.3 Rise Metaverse City Discourse

With the new industrial revolution (industry 4.0), scholars introduce the possibilities for smart city governance with the metaverse (Allam et al., 2022). The metaverse discourse finds its roots in the science fiction novel Snow Crash from 1992, written by Neal Stephenson (Allam et al., 2022; Kashiripoor, 2023) and has since acted as a fictional concept taking on various forms. Up until recently,

when big tech companies like Meta (Facebook) claim the metaverse concept as a reality in the form of their upcoming products, at the start of the 2020s. The metaverse is a "futurist digital world that […] is immersive and feels tangibly connected to the everyday objects and the real lives and bodies of humans" (Allam et al., 2022, p. 4). Now, the metaverse city discourse has occurred as a form of smart city discourse, enabled by technologies of the Industry 4.0 concept and generally seems positively backed by scholars, considering their disruptive urban capabilities (Allam et al., 2022; J. Park & Yoo, 2023). Yet, scholars also stress the desirability of reliance on data for urban governance, which is owned by big tech companies (Allam et al., 2022; Haarstad, 2017; J. Park & Yoo, 2023). Critical rhetorics exist on the ability to safeguard democratic norms (Keskin, 2018) and the desirability of "data-driven corporate-led technocratic governance" (Bibri, 2022), serving the agendas of tech giants (Allam et al., 2022), especially taken the historical context of the big tech's efforts to privacy protection. Nowadays, the global economy is for a significant amount, based on surveillance capitalism by a variety of big tech companies. Therefore, these private entities hold a significant amount of power to impose their neoliberal and techno-optimistic visions as hegemonic, thereby shaping urban policy. However, the actual context in which these narratives take place decides how these power dynamics look in practice (Bär et al., 2020).

Metaverse city discourse, as an upgraded smart city discourse, is vulnerable to these concerns and power dynamics. The metaverse is framed to be able to replace great parts of urban public services (Chen et al., 2024) and social activities (Kashiripoor, 2023) by a platform-mediated life. This Metaverse city discourse is an extension of the smart city narrative and is scholarly welcomed with a generally positive tone, considering the benefits for efficiency, security and public service delivery (Allam et al., 2022), while the media seems to be more sceptical. Media's coverage is vital for the Metaverse's public reception (Dolata & Schwabe, 2023). Virtualization of the real world is argued to be where the metaverse enters the smart city discourse since it has disrupting capabilities for both social urban lives, as well as urban governance. Although scholars agree with its potentiality, conveying this message is mostly performed by the capitalistic tech giants (Allam et al., 2022; Bibri, 2022). Socially, digital twins of cities (virtual replicas of cities) change how people interact and find entertainment. On the governance side, metaverse cities virtualize urban service delivery, as well as the ability for urban plans to be assessed with data from the real world before policies are implemented. Mainly considering infrastructural, and climate adaptation and resilience programmes. By going towards increased virtuality of urbanity, the metaverse city discourse becomes the prevailing smart city ideology. It is because of these reasons that metaverse city discourse has entered the policy discourse globally, in a relatively short time, boosted by COVID-19 (Allam et al., 2022) and Facebook's dedication with its name change to Meta as they released their plans for Metaverse, after which many companies followed (Kashiripoor, 2023).

2.4 Diversity of Metaverse City Meanings

Academic discourse around the metaverse seems to be certain about its inescapable disruptive potential. This techno-optimistic discourse frames that by 2030, the majority of activities will take place in the metaverse (Kashiripoor, 2023). While Kashiripoor (2023) argues that the metaverses can already be classified, Dolata & Schwabe (2023) argue that assuming such an objective predetermined definition of a metaverse is equal to ignoring the ideological shaping that goes behind defining and implementing technology and assumes that technology is static. Like any other technology, what it becomes is prone to public sense-making processes, also known as the public discourse. Many meanings exist at the same point in time, according to differing interests. These parallel meanings can, and often do, divert. Technology corporations are generally optimistic about the metaverse, as they see an opportunity for profitability in a centralized form of a metaverse (Dolata & Schwabe, 2023). One where a central organization (the tech corporation) controls the storage of data for all users (Kashiripoor, 2023). Governments seek to control the metaverse in a decentralized, non-profit manner through policymaking, which the corporations in turn try to influence by infiltrating this process. Moreover, the urban context is changing how the discourse comes to expression. There are different characteristics and metaphors (Bär et al., 2020), but also differing aspects that are present and absent shaping the discourse (Given, 2008).

After assuming the nature of technology as an outcome of social processes of ideology arenas, Dolata & Schwabe (2023) identified three main discourses that exist simultaneously within the academic society: technical, use-oriented and structural discourse. The technical discourse is occupied with the different technologies implied by the metaverse, and how the platform combines them. Further, it stresses the strengths and weaknesses when implementing the technology. The use-oriented discourse orients itself around the users, their usage forms, and their implications. Lastly, the structural discourse seeks to conceptualize the metaverse, as it assumes the phenomenon to be of significant interest to society and the academic community. Aside from the academic community, they identified four relevant social groups (RSG) which shape a metaverse according to their sense-making, and interest clash. These are producers (Big Tech, Non-commercial providers, Game Producers), users (individual users, retail and entertainment), advocates ((crypto) investors, affirmative governments, agnostic governments) and bystanders (sceptics, critics).

2.5 Conclusion

To sum up, this research will focus on Smart city governance discourses, in the context of metaverse city implementation or metaverse city governance. The theory argues that there are several models of smart cities, with their own complexities, but a prevailing struggle for the position of the capitalistic big tech giant in urban governance. These elitist private stakeholders, tend to possess discursive hegemony and use that power to pursue neoliberal interests. Yet the smart city narrative keeps changing, especially following the influence of the fourth industrial revolution. With it, a discourse has started around the

metaverse city. This new form of smart city discourse is generally positive towards its disruptive capabilities on urban life, both socially as well as governmentally. Yet also here, imbalanced power dynamics are found to influence the ideology arena, and the desirability of corporate-led digital governance is often questioned in the literature. The Metaverse discourse has gained a significant amount of attention and therefore several discourses have been identified to exist around the topic. It is these discourses, which are part of public sense-making processes, which will shape the actual outcome of a metaverse city. This research will use these theoretical approaches to study the cases of Seoul and New York, to find the sense-making that is going behind these cases of metaverse cities and if the concerns of corporate power imbalance are also influencing ideology-shaping within them. Since both cases are often labelled as global cities with innovative industries, Big Tech companies are expected to control the discourse towards their interest in both cases. The next section will describe the employed methods by which the study will explain the differences in discourses considering these elements, between New York and Seoul.

3 Methodology

3.1 Introduction

This bachelor thesis is aimed at acquiring answers to research questions which are both interpretive as well as comparative regarding two metaverse city discourses, those of Seoul and New York. Therefore, the research employs a comparative design, meaning that two objects of study, in the case of this study the two selected cities' discourses around the metaverse, will be described and compared to each other to understand their differences and similarities. The coming sections will provide the rationale of the selected cases, the approach, and limitations of gathering data on those cases, and the approach to analysing the data to acquire adequate answers to the research questions. A critical discourse analysis is employed to gain insights into different textual ideology-shaping methods that are used to frame the metaverse. This is then the foundation for interpreting these texts, to acquire knowledge on hidden meanings and ideology shaping attributes they convey, as to maintain or adapt the power dynamic's status quo. Note that this strategy also involves identifying the absence of certain aspects, next to analysing the presence thereof.

3.2 Case description

The research is centred around studying metaverse city discourse of the global cities Seoul and New York. The main rationale for a discourse analysis over other methods is provided by Bibri (2022), who emphasizes novelty and the emerging nature of the metaverse city phenomenon, implying best suitability for discourse analysis. On top of that, discourse scholars assume discourses to be responsible for changing social reality and therefore of the metaverse and the city (Given, 2008), making it important to investigate. By choosing a comparative design, the research can explore the idea that discourse is shaped according to its urban contextual boundaries (Bär et al., 2020). The discourse that the research is going to analyse is essentially the present ideologies concerning the metaverse's application for urban governance, and which ideology excerpts the power to be prevailing and hegemonic. A discourse is assumed to be an object in itself, which can take many forms. Discourses are interpreted concerning their vocabulary, expectations, metaphors, symbols, and visions for the future they convey.

This thesis has selected the cases of New York and Seoul since they are frontrunners in implementing the metaverse in their urbanism. More importantly, these cities are fundamentally different in their historical and cultural context and are expected to offer adequate cases in a comparative study. Surface-level differences are corporate city Seoul's 'Metaverse Seoul' narrative (Ramos, 2023; World Economic Forum, 2024), Wallstreet's implications on New York as a financial centre, and narratives like 'Silicon Ally' (Sabbah, 2015). Seoul's historical context is marked by struggle for a global leading position around the 1950s, being one of the lowest ranked politically and economically. Radical value

reformations framed as 'Western technology, Eastern spirit', were adapted to make Seoul more like the 'West'. Now, it is pushing the smart city agenda (Choi, 2010) and launched the first complete digital twin under the 'Metaverse Seoul' narrative (Ramos, 2023). Seoul's first step is mainly narrated as an entertainment platform, pushing Korean culture like K-pop (Young & Stevens, 2023). On top of that, the cities are both 'global cities' which will result in increased chances of data availability in English.

New York is chosen as the case to compare with Seoul because its smart city discourse context is perceived to largely be different from Seoul's. It is marked by a global city that is struggling with increasing population (density) and modernizing its infrastructure, as pressure on cities to solve global challenges is increasing. Historically, New York is characterized by leading economically, marked by innovation by big tech companies from the US, and a source of cultural inspiration, as the city is often referenced and reduced to streets such as Broadway and Wallstreet (Lai, 2022), or metaphorically as Silicon Alley (Sabbah, 2015). So, the cases have differing roots and socially/culturally they have differing values. Yet they are facing the same challenges of increased urbanization, which the smart city and the metaverse city are supposed to facilitate solving. Comparison of the discourse will expose how exactly the metaverse's role in it is framed and how it affects the reality in policy strategies.

3.3 Method of data collection

The metaverse has become a prevailing ideology of the smart city, so to find its narrators data from both private and governmental (public) sources need to be analysed. Discourse from urban governments can be best interpreted from official documents, as well as from public official's presence in the media. Public documents for Seoul include policy strategies and public statements that are available through the official website of the Seoul Metropolitan Government, from which its political discourse will be depicted. New York's governmental websites do not have a specific metaverse section as Seoul, therefore using the metaverse as the keyword to look through the websites, will provide its data. Moreover, New York allows access to minutes of official meetings and motions. For interpreting ideologies from the private sector of the metaverse city discourse, private versions of strategies, statements and interviews are used, because they are expected to include many meaning-making aspects, as they are meant to attract customers and investors to these companies, especially in the case of press releases, but online newspaper articles and blog posts will also be included when freely accessible or through databases provided by the University of Twente. Companies that are expected to be present are Meta, Google, Microsoft and Samsung, but also smaller (start-up) companies. Public and private sources are expected to differ from each other in terms of meaning-making strategies since companies and news outlets are concerned with influencing consumers for profit, while public documents are generally assumed to be only informing. Contrastingly, public documents most probably also entail influencing instances since politics is also about gaining support. Plus, discourse theory assumes any form of text to have a purpose more than informing (Given, 2008).

Certain criteria are employed to limit the dataset. The most important is that the textual data is published later than the 28th of October 2021, as this is the date Facebook made its metaverse announcement. This announcement is seen as a major initiator of the metaverse (city) discourse, especially for New York. There is no expected loss of data for Seoul since the first 'Metaverse Seoul' announcement was on the 3rd of November that same year. Second, data is limited to textual forms, because of availability purposes and analysis convenience in a situation with limited time. Third, the document/article needs to be about the metaverse for replacing activities which normally take place in the urban environment, and not just about smart cities. Fourth, the documents need to cover the urban territories of New York and Seoul. Sources covering also another territorial area only the parts focussing on these cases will be used as data in the analysis. Lastly, only English data will be incorporated in the analysis because meaning-making language like metaphors and symbols, might get lost in translation. This is not limiting the information for Seoul, since Korean newspapers like 'The Korea Times', and 'The Korea Herald' write in English. Nexis Uni is used to gain access to information from paid newspapers like 'The New York Times' and 'Wall Street Journal'.

3.4 Method of Data Analysis

The methods and criteria result in a dataset of 80 documents, of which 39 cover Seoul and 41 New York. The analysis performs a comparative critical discourse analysis (comparative CDA) of this textual data from governmental and private sources, surrounding the metaverse city discourse for the cases of Seoul and New York. CDA is concerned with the intersection of discourses, ideology, and power, by focusing on linguistic/grammatical analysis. It assumes that the matter of language use, is responsible for different outcomes stemming from social problems, as the metaverse city (Given, 2008). After data collection, the analysis starts with screening the text for part of interest, by employing a coding scheme which is created from deducting keywords from the Theory of this thesis. The coding is created such, that it will reveal where in the text specific ideology-shaping aspects are present, as keywords are a sign of certain aspects of the metaverse discourse that have become apparent from the theory. These also include the presence or absence of actors within texts, the role in which actors are placed and patterns of processes that are linked to specific actors (Given, 2008). The data will be automatically coded using Atlas.Ti software and the keywords from the coding scheme, thereafter, critically assessed manually for important passages and quotes. From the data, discourse will be depicted and illustrated by using these quotes to strengthen the argument of the presence of this discourse.

Following the structure implied by the research questions first is to analyse the data for metaverse city discourse within the cases separately. Typically for CDA, a coding scheme is used. The scheme is constructed before the analysis and is presented in Table 1. The codes in the scheme act as the link between the data and the instances of meaning-making within the text that are of interest for the analysis. The metaverse city discourse is part of the smart city discourse and is therefore a core concept for

valuable data. Finding the smart city technologies in the text can be a sign of the technical discourse around the metaverse, that Dolata & Schwabe (2023) identified. Other aspects are urban management and the metaverse city itself. Ideology is a central part of a discourse (Bär et al., 2020) and identifying it goes according to values, beliefs and symbols that are conveyed in the text. Values and beliefs are user-oriented aspects of the metaverse and might indicate the use discourse. The prevailing ideology in other smart city ideologies has been mainly neoliberal, which is likewise expected for the metaverse city. Connected to prevalence, is hegemony. Hegemonic discourse implies being able to assert power over the shaping of social outcomes. This entails a dominant actor as well as a prevailing ideology. Lastly, hegemonic discourse in smart cities has been around 'one solution to many problems' idea and will be coded in the data, not only because of its importance in the smart city discourse but also because it is an indicator of the structural metaverse discourse orientation.

After the interpretation of the relevant passages and their meanings, there will be a clear description of the metaverse city discourse for the cases. It will be clear which ideologies are pushed by which actors, to become hegemonic and have power and control. It is then, that this thesis will address the comparative component of the research question. The metaverse city discourses will be compared to each other considering their prevailing ideologies and hegemonic discourses, how it is framed, by whom and by employing which linguistic symbols.

Core concept	Items	Keywords/codes
Smart city governance	Smart city technologies (technical discourse)	Information and communication technologies (ICT), Internet of Things (IoT), Artificial intelligence (AI)
	Urban management	Urban planning, public service delivery, digital governance
	Metaverse city	Metaverse Seoul/New York, virtual reality, digital twin
Ideology	Values and Beliefs (use discourse)	Culture, experience, privacy
	Symbols	vision, optimism, future
	Neoliberal	Profit, efficiency, data
Hegemony	Dominant actor	Tech giant, policymakers, information capitalism
	Prevalence	control, authority, interest
	Problem-solving panacea (structural discourse)	Sustainability, quality of life, change

Table 1: coding scheme

3.5 Conclusion

Metaverse Seoul and New York are two global cities with significantly differing contexts but are both highly invested in implementing the metaverse into their urban societies. These cases will be compared on their metaverse city discourses, to acquire knowledge on what ideologies are present and which prevail in certain power structures behind the urban metaverse implementation narratives and strategies. For this, first, a dataset of textual data in the English language about the metaverse in these cities is created consisting of 80 documents from online available sources. Then the coding scheme of Table 1 will be applied, screening the data for ideological elements that are deducted from the theory considering smart city governance, ideology, and hegemony. Afterwards, relevant passages are interpreted on the meaning-making and type of discourse that they convey. These insights are used to answer the first two sub-questions regarding the discourses of the two separate cases. It is only then, that these discourses will be compared to each other concerning their differences and similarities, to be able to answer the comparative research question of this thesis.

4 Analysis

4.1 Introduction

This discourse analysis will depict the metaverse city discourses of Seoul and New York, by analysing public, corporate and newspaper documents and interpreting the meaning behind the words that are used. The metaverse city discourse is a smart city discourse, which is generally linked to neoliberal practises of companies trying to capitalize on urban governance, for them to gather data to sell in the world of data capitalism. Still, these technologies offer great opportunities for urban governments to make urban management more efficient, so also public bodies want to control this discourse and the social outcome that stems from it. Therefore, this analysis will search for the power dynamics that play behind the shaping of a metaverse city, and who is dominant enough to make their ideology prevailing. The chapter will continue in the order of the sub-questions that guide this research: first, the metaverse city discourse of Seoul will be analysed and expressed. Second, the same is done for New York, after which both will be compared to highlight to what extent these discourses differ, with regard to their contexts. Doing this will give insights for both the public and private considering the development state in which the metaverse city is now. It allows for policymakers to act upon it, whenever it feels like it is needed to protect its citizens against it.

4.2 Metaverse Seoul Discourse

The Metaverse city discourse of Seoul, or metaverse Seoul discourse is marked by the dominance of the urban governance body itself, called the Seoul Metropolitan Government (SMG). By stating that the government is reacting to an "ICT paradigm shift and provision of new concept public services by introducing metaverse, the next generation platform, to the municipal administration" (Seoul Metropolitan Government, n.d.-a, p. 1), the SMG is emphasizing the transformative capacity of the metaverse. In accordance with Chen et al. (2024) and Kashiripoor (2023), The SMG's vision argues that the metaverse is going to change everything about urban life and it wants to be at the centre of providing it. The use of the word paradigm brings great significance to their statement. Paradigms, according to Thomas Kuhn's 'Structure of Scientific Revolutions' (1970), cannot coexist. The Seoulite government therefore implies the metaverse is going to become the sole host of their public administrative service delivery. Additionally, a reoccurring theme in the discourse coming from the SMG is the novelty of a Metaverse for digital governance. Phrases stating that Seoul's own 'Metaverse Seoul' project, is the first metaverse with a municipal setting that is used for public administration (Seoul Metropolitan Government, 2022), is a prevailing theme in official communications. Seoul's government optimism about the metaverse is evident as the project was announced in November 2021, during the COVID-19 pandemic, where the platform was called the new way of communication in a post-covid era (Seoul Metropolitan Government, 2021).

The data highlights that the SMG views its Metaverse Seoul platform as the benchmark for other urban governments. To do this, the government itself has set up a Smart City Prize. In an official statement, the SMG emphasize this benchmark characteristic of their platform, as they claim it has set up "the Seoul Smart City Prize to share its core values of inclusivity and innovation with the world" (Seoul Metropolitan Government, 2023c, p. 1). The price will be awarded from the 'brand' Seoul, for the most appealing and inclusive smart city initiatives. Even though the significance of Metaverse Seoul as an urban platform is recognized as Time magazine nominated the project as part of 2022's best inventions (Woo-hyun, 2022), this statement is one example of the attempt to dominate the Metaverse Seoul discourse, going in contrast to the argument of Brand (2005) that these discourses are elitist-dominated. Moreover, Brand's argument states that these elitist ideologies are against the public interest, while the SMG is attempting in their communications to prove otherwise, by emphasizing in their communications and policy visions on the metaverse, that they are the first to use the metaverse for administrative tasks (Financial Press, 2023; Seoul Metropolitan Government, n.d.-a, n.d.-c, 2021, 2023b), yet hegemony does allow the SMG to pursue its own interests as well. Currently, the administrative public services include youth counselling, arranging taxes with an AI chatbot, industry (startup) support, official documents requests which will be directly sent to the 'Seoul Wallet' app once the documents are issued, and a general helpdesk for administrative questions one would normally ask the municipal administration (Financial Press, 2023; Seoul Metropolitan Government, n.d.-b).

The prevailing theme of the techno-optimistic one solution to all (public) problems, as Park and Yoo's (2023) problem-solving panacea argument, continues in their vision for the future. The SMG states in their 'Main Policies: Metaverse Basic Plan' their policy strategies to integrate the metaverse deeper into urban life. It set out its visions from 2022 to 2026, to expand the metaverse into the sectors of economy, education, culture and tourism, communication, city (management), administration and infrastructure (Seoul Metropolitan Government, n.d.-c). Meanwhile, companies are already capitalizing on the metaverse real estate market. Although provided through a different metaverse platform called 'Metaverse 2', digital versions of buildings in Seoul are already available. After acquiring these properties, organising events or concerts is suggested to earn back the investment (The Korea Herald, 2022). The SMP, however, wants to keep out of the neoliberal capitalists, as it states to use its digital twins, to attract tourists to visit the city digitally (Seoul Metropolitan Government, n.d.-c), as it is also spreading the message that it is working on multiple languages in the platform in the attempt to become a "Global platform" (Seoul Metropolitan Government, 2023g, p. 1). This is an ambiguous statement considering public service delivery for Seoul is prevailing in the discourse. Seoul's metaverse expansion discourse continues as the future of work with the metaverse, is put to words as one of "future-oriented smart work by applying metaverse into every field including meetings, events, education and international cooperation, as well as regular administration" (Seoul Metropolitan Government, n.d.-c). By using the word 'smart', it is using an empty signifier like 'Smart city' itself has been labelled by

Haarstad (2017). It is interesting what the government means with this, as making work smart, would imply that its current state is 'dumb work'. The SMG frames its multi-sectoral expansion as such, that it hides the ultimate control over its citizen's data and social life that it gains with it.

As Bär et al. (2020) argue, the metaverse city discourse is prevailing as certain parties use their hegemonic power to impose it on the public. The SMG is imposing a metaverse city discourse which is highly techno-optimistic, future-oriented and digital governance-focused. The public, however, does not convey these same meanings of the metaverse city. News sources within the dataset, stress that Metaverse Seoul cost multiple billions of won for developing its first phase, but its user levels have been low. This pessimism is emphasized by stating the fact that out of the almost 10 million residents of Seoul (D. Park, 2023), only 644 used the Seoulite metaverse platform in September 2023 (Satoh et al., 2023). That the public assigns less optimistic and successful words to Metaverse Seoul is also clear since another news website lists Metaverse Seoul as one of the "already seen previous attempts when the capital of South Korea, Seoul, announced the Metaverse Seoul" (Satoh et al., 2023, p. 2). An attempt, without mentioning its success or failure, is easier to see as a failure than a success. SMG's discourse is marked by the absence of these facts, but they do seem to show it implicitly, by employing strategies to attract people to join its metaverse movement. First of all, the government communicates via official sources about events it is organizing digitally, such as its one-hundred-day anniversary celebration of the metaverse (Seoul Metropolitan Government, 2023e). Secondly, it is asking people to contribute to its metaverse city discourse, by posting about these events, and new features like a virtual service, on their social media (Seoul Metropolitan Government, 2023f). From this is interpreted that the SMG is struggling to maintain a position of power in the smart city discourse, with its metaverse visions.

However, within the metaverse Seoul discourse, the SMG is already somewhat hegemonic, and they seek to prevail by using communicating strategies that continuously show an absence of (big-)tech companies. From the theories of Bär et al. (2020), Brand (2005) and Allam et al. (2022) it was expected that big tech companies like Samsung try to stay on top of the discourse, as often is the case for the data-capitalistic world of today, yet almost no tech-company is apparent in the metaverse Seoul discourse. This seems to be a purposely adapted strategy by the SMG. To prevail in the metaverse Seoul discourse, the SMG never mentions the company that develops the metaverse for them in their public communications. Yet, the SMG structurally mentions themselves as the creators, developers, or builders of Metaverse Seoul. However, the Korean press notes that "In each phase, the platform is built by a private company that won a bid from the city. "A software company named Naviworks, […] won the public bid to build the first phase." (Sung-Eun, 2023, p. 2). It seems clear that the SMG wants to stay clear of the neoliberal ideologies that often go around technological transformations, especially around smart city ideologies (Bär et al., 2020). The press pessimistically questions the approach of developing a unique metaverse platform, rather than using an already existing one since there are already many private platforms available. According to Dolata & Schwabe (2023), the media plays a crucial role in

controlling public reception. Therefore the mayor of Seoul tries to justify its investments as part of the long-term visions of Seoul and because they perceive the data safer at their control than private control (Sung-Eun, 2023). The Korean national government exaggerates against this pessimistic view of the press, and mentions "the development of this technology a national priority." (PS News, 2023, p. 1), while the Korean press stresses that 'critics' are convinced this endeavour is a waste of the taxpayers' money. The discourse coming from sources representing the citizens seems to contradict that of governmental bodies.

The discourse it is conveying is most similar to the use-oriented metaverse discourse. This is because the discourse is very centred around the user experience. The SMG is creating a rhetoric that it is not trying to make the metaverse a profitable platform by exploiting its users, rather it wants to make a platform with efficient public service delivery and enjoyable entertainment and communication facilities. Moreover, it is focused on making the platform safe. It brings the question of what it is trying to hide, by being as un-transparent as the SMG about what is going on behind the scenes. The government acknowledges moral issues that have arisen with the rise of the metaverse "such as sexual harassment using avatars, verbal abuse, and invasion of information. The SMG will prepare ethical guidance for the metaverse to prevent those issues based on three principles: respect, equity, and reality connection." (Seoul Metropolitan Government, 2023a, p. 3).

The Seoul Metropolitan government is conveying a hegemonic metaverse Seoul discourse that is highly techno-optimistic and sees the future urban life as the metaverse only. The SMG is using its hegemonic power to communicate a decentralized Metaverse platform, away from a neoliberal capitalistic platform from the private sector. Yet it is unclear who controls user-data, and how. Possibly, there is still problematic data-centred urban governance, which is controlled by a tech company for which academic discourse is trying to warn the public (Allam et al., 2022; Haarstad, 2017; J. Park & Yoo, 2023).

4.3 Metaverse New York Discourse

The metaverse New York discourse is more in line with the theoretical framework based on work from other scholars as Bär et al. (2020), in the sense that the discourse is following a neoliberal ideological path, where the message of an urge for implementation is embedded within a techno-optimistic rhetoric, mostly conveyed by tech-companies with a sole interest of capitalistic exploitation. Metaverse New York is dominated by companies and their pursuit of capitalizing, to such an extent that there is not one specific hegemonic Metaverse New York discourse. This creates a wide variety of different platforms, which have different purposes. Metaverse and AI company 'Wondra' conveys this techno-optimistic message, by describing the metaverse (and especially its own metaverse) with the metaphor of "a new land and a promised land for all humanity" (Wondra, 2024, p. 1). This rush for companies to capitalize on the metaverse has also rippled over to the real estate market. New York's property market is known for being unfriendly to small budget holders, so a real estate agent is taking the initiative to take the

market to the metaverse. Another capitalizing attempt, but in contrast to Wondra's promised land, this real estate agent is selling the first digital New-York inspired, un-desirable apartment with mould, empty pizza boxes and rats included, for just over half a million dollars (PR Newswire, 2022), proving that neoliberal ideological discourse does not put the public's interest first.

The capitalistic tendency of the metaverse New York discourse is most notable from two reoccurring subjects in the data. First, the metaverse's surge in popularity in the past years is explained using Facebook's name change to Meta (Insider, 2023; Isaac, 2021; Jones, 2021; Rosinsky, 2022; Squires, 2021; Tusk, 2022), from which can be interpreted that just one company would be responsible. Secondly, in contrast to Kashiripoor (2023), who states prospects of the metaverse in terms of embeddedness into (social) life, the metaverse New York discourse uses prospects in terms of current and expected future states of the market size of the metaverse industry (GlobeNewswire, 2024a; Insider, 2023; Isaac, 2021; Kanowitz, 2024; Wolff, 2023), as the rationale for investing time and money in the technology. These money-centred rhetorics are chosen over capability-oriented ones to lay out their benefits for (urban) life. It is therefore most similar to Dolata and Schwabe's (2023) structural discourse, stressing the importance and value of metaverse technology for society. Another capitalistic tendency of the metaverse New York discourse is the influence of connections to the crypto sector. Digital currencies are an essential technology for the metaverse, although it is not given attention as such by the scholars from the theoretical framework. The NYC metaverse discourse emphasizes this interconnectedness of the technologies, as companies are convinced that "Almost all commerce in the Metaverse is conducted with crypto." (Rosinsky, 2022, p. 2). The New York University School of Professional Studies (NYU SPS) identifies this neoliberal tendency, as well as acknowledges this direction of the discourse. In an announcement of the 'First Summit on Cities and the Metaverse', they frame the metaverse as such by stating: "All of us who grew up on the internet need to begin thinking of the metaverse as an internet with higher stakes" (Beckman et al., 2023, p. 1). The discourse is also characterized by the relatively frequent mention of Smart City technologies like AI and digital twins. This technical discourse (Dolata & Schwabe, 2023) is being amplified by using adjectives like 'cutting edge' and 'immersive'.

Additionally, the cities' art sector also seems to be aware of new revenue opportunities, as the world-renowned Metropolitan Museum of Art (MET) integrates the metaverse in its exhibition and several fashion companies went (partly) digital in a metaverse during the New York Fashion Week (Sauceda, 2023). Fashion is both a form of art and a commercial product, yet concerning the metaverse fashion week in New York, the commercial part is emphasized as "The birth of the Metaverse and digital collectables has shifted the playing ground for how creators interact with consumers." (Sauceda, 2023, p. 16). Here, the discourse is not about 'users', but the economic equivalent 'consumers'. Furthermore, even sports are being commercialized using the metaverse, in New York. Tata Consultancy Services (TCS), which is one of the head sponsors of multiple major marathons worldwide, is promoting the

usage of a personal digital twin, for training before a marathon (O'Leary, 2024; Tata Consultancy Services, 2023). Another sports metaverse initiative is called ETMeta, which is interpreted to have as its main focus, to monetize sports using the metaverse, since the company observes a new economic flourishing for sports when it states in a press release: "Let's explore this new world full of opportunities and challenges together, and create a new economic era for sports enthusiasts!" (GlobeNewswire, 2024b, p. 2). Again, the metaverse is put as a new money-making machine, where the customer itself becomes the product.

Next to the neoliberal ideological meaning-making from mostly corporate actors, there is also the governmental force that wants to influence the outcome of the metaverse towards a more usability-centred discourse. Although the data has proven the government's prevalence to be minimal. One of the actors that is slightly present in the New York City discourse, is the Federal Highway Administration. As they are financing a research project at Columbia University, their "vision is that one day we will have a data-driven traffic management center to improve safety, mobility, and reliability." (Federal Highway Administration, 2022, p. 3). The metaverse, specifically its digital twin technology, is put as a problem-solving panacea for traffic and mobility problems. The other major actor of this ideology is NYU, which brings alive a new verb for this ideology, as they emphasize ""Metaversing" city services can fundamentally shift the accessibility and level of engagement with citizens." (NYU School of Professional Studies, 2023).

New York's citizens add to the discourse, a techno-pessimistic rhetoric through several sources, although their impact on the metaverse city discourse is minimal. In a meeting with the governing body of the New York City borough of Queens, called Community Board 6, several citizens expressed their concerns over the absence of the government. While tech companies are preparing the city for smart city technologies with 5G towers, critique is expressed: "I believe this is a historic moment where we as a community have to take a moment to study the direction society is going on so that we can have a say in what that direction is." (Community Board 6, 2023, p. 13). The citizens express their fear of the tech giant, which comes with the neoliberal ideology around smart cities, as J. Park & Yoo (2023) described. As citizens call the situation historic, they are putting a lot of urgency on the problem, showing the perceived power the tech companies have. Next to rules about the physical world of New York, there is also a demand for regulatory action in the metaverse itself, as "It doesn't take a Hobbsean scholar to know that when you've got millions of people gathered together in one place, even virtually, someone is going to need to be in charge." (Squires, 2021, p. 1), people are asking themselves if Mark Zuckerberg (the CEO of Meta) is supposed to be the mayor of the metaverse. Moreover, researchers from a multitude of disciplines, ask the city government to enter and regulate the metaverse as "A "wait and see" approach will only cause a city to fall behind and face steeper competition and higher costs" (Beckman et al., 2023). In the same vein, Tusk (2022) positions the government's absence in the discourse as an irreversible process, where being too late means uncontrollable technological adaptation

and capitalization. From the data, it is obvious that the people and institutions from outside the hegemonic neoliberal bubble, convey the exact opposite ideology to try to protect themselves against the big tech firms.

The metaverse New York discourse arena is one occupied by a wide variety of corporations that try to make their problematic neoliberal discourse, a hegemonic one. Since many corporations make their own metaverse platform, a hegemonic discourse means that their metaverse platform becomes hegemonic, which brings power and control over its applications, data, and revenue. These corporations are not only Silicon Valley-based tech giants like Meta (Facebook) but also cultural and sports companies are entering the arena, to pick their piece of the market that this techno-optimistic ideology shapes to be worth countless billions of dollars. The urban governments' presence to control the discourse to become beneficial to its citizens, is marked by almost complete absence. Next to one New York City research project funded by the federal state of New York, the governing body takes no action. In the meantime, researchers, citizens, and the press are asking for regulations to limit the power of the tech giants. This dominance of corporate discourse is creating a narrative that is to some extent similar to both technical discourse and structural discourse from Dolata & Schwabe (2023).

4.4 Differences in Metaverse City Discourses

Discourses can differ greatly from each other, which has to do with the context in which they are embedded (Given, 2008). The context is responsible for differences in for example the actors that are present, the path dependencies coming from the historical context of a city, the main economic sector and much more. The metaverse city discourses of Seoul and New York differ greatly, but to some extent are similar to each other. The main discursive difference between the two cities is the actors that are present in the ideology shaping space, and which of them prevail in or control the discourse.

Metaverse Seoul's discourse is marked by the omnipresence of the urban municipal government, the SMG. By naming its metaverse project 'Metaverse Seoul it is owning the discourse, which was mentioned in the data 254 times. It is the government's hegemonic discourse that controls the outcome of the metaverse, which it is steering into a usability-focused narrative, as it clearly does not want to be associated with neoliberal ideological tendencies and focuses on "Public access to the Seoul Metropolitan Government has broadened to, literally, another dimension." (Dong-hwan, 2023, p. 1). Metaverse New York discourse, on the other hand, is marked by the government's absence. Its absence stretches from public communications and policies to the absence of creating a 'metaverse New York' project. In fact, the metaverse New York discourse has only been mentioned in the data once, as a fictional construct from a movie (Gorber, 2024). As a result, hegemonic status within the discourse is still up for grabs, and with it the power to possibly control economic development (Beckman et al., 2023). A wide variety of companies with their specific metaverse projects contrasts that of Seoul. The neoliberal ideology that is shaped has a vision of the world where "The future store is dynamic and is a

downloadable immersive interactive experience" (Makridis, 2022, p. 6). As Seoul's government discourse emphasizes the future where the whole city and its (public) activities are replaced by the metaverse by 2026 (Satoh et al., 2023), New York's financial centre context shapes the discourse towards a future expressed in market value's, ranging from \$452.25 billion (GlobeNewswire, 2024a) to \$13 trillion (Community Board 6, 2023).

As Given (2008) argues, discourses are a way of meaning-making. Once a discourse becomes hegemonic, it is the meaning of the phenomenon that is implied with it, that guides social reality into a certain direction. Hence, actors want to become hegemonic and enjoy that power. Seoul and New York are divided in their meaning-making, as they are in different stages of the process. As the SMG is hegemonic in the metaverse Seoul discourse, it can clearly define the technology without much interference. The SMG moderates its language while defining the metaverse as "an online municipal administration platform based on new technologies" (Seoul Metropolitan Government, n.d.-c, p. 1). It also identifies clearly who governs within the metaverse, as Seoul's mayor is also Metaverse Seoul's mayor (Satoh et al., 2023) and the SMG emphasizes its role in policing illegal activities in the metaverse, such as digital sex crimes (Seoul Metropolitan Government, 2023d). Meaning-making around the metaverse New York discourse is more confusing. There is no such hegemonic actor that clarifies the meaning of the metaverse in New York's urban life. This lack of meaning is also observed as a reason why there is no such digital twin as Seoul, next to privacy and investment concerns (Kanowitz, 2024). This ambiguous state is described as: "We know it'll resemble, in some ways, the digital world we already know and, in others, it will be completely different." (Tusk, 2022, p. 1). Since capitalistic forces are dominating the metaverse city discourse of New York, the metaverse as such is just a new opportunity for money-making and commerce. Moreover, there exists uncertainty over who is supposed to govern the metaverse. The media discourse frequently mentions Mark Zuckerberg from Meta. While Meta is being framed as the creator of the mainstream Metaverse, they question if Zuckerberg is de mayor of the metaverse (Squires, 2021). At the same time, the civil community is calling for a deliberative approach where citizens and the government govern the metaverse together (Community Board 6, 2023). It is obvious that the discourses from Seoul and New York apply differing meanings to the metaverse, resulting in different uses of the platform.

Next to fundamental differences in the metaverse city discourses, there is also a similarity visible in the data. Both discourses are highly techno-optimistic and argue the metaverse according to the problem-solving panacea idea, although the way in which this is expressed differs. First of all, Seoul's vision is to solve all its administrative problems by replacing urban activities with the metaverse, stating that "If you are living in Seoul, you no longer have to go to your local community service center in person" (Seoul Metropolitan Government, 2023b, p. 1), as well as the strategy to go further towards integrating the metaverse in every other sector (Seoul Metropolitan Government, n.d.-a), and it is convincing its citizens to transform their lives (Seoul Metropolitan Government, 2023a). By employing a use-oriented

discourse, the metaverse is supposed to be 'one solution to all problems', which is a highly techno-optimistic view. New York's techno-optimistic problem-solving silver bullet is expressed in a 'many solutions to many problems' manner. A variety of companies are framing their metaverse platform to fix a certain problem. To name a few, Columbia University's Smart City Project is supposed to solve New York's traffic problems (Columbia University Data Science Institute, 2023) and Meta Pride Land is going to solve inclusivity problems for New York (Papadatos, 2022). In the way Seoul expressed techno-optimism by its vision of replacing all urban life, so does Ney York's discourse notice "integration with web3 more so than any other iteration of technology in the last century, outside of the original adoption of the internet." (Sauceda, 2023, p. 4). The internet changed everyone's lives tremendously, thus comparing the metaverse to the internet is highly techno-optimistic.

4.5 Conclusion

The first research question was to find out how the metaverse city discourse comes to expression in Seoul. The Seoul Metropolitan Government (SMG) is the dominant actor in the metaverse Seoul discourse and is mostly hegemonic. Its techno-optimistic rhetoric that it is conveying is focused on providing public service delivery through the metaverse while focusing on spreading the values of freedom and inclusivity. It is a use discourse, as the SMG only communicates about the functionality of its Metaverse Seoul platform, rather than the technologies it requires and implies, or its specific value to the urban community. From further communications about the state of the platform, it seems that the public does not yet share this ideology completely. Similarly, the media discourse is also rather pessimistic.

To answer the second research question, the metaverse New York discourse is characterized by the absence of a hegemonic actor, yet it can be best described as an arena of actors who are mostly companies, that battle for their discourse to become hegemonic. Hegemony essentially means the adaption of their meaning of the metaverse, resulting in the adoption of their product or service. A techno-optimistic ideology dominates over others and is focused on neo-liberal ideas of commercialization of the metaverse. As a result, the discourse is similar to both structural and technical discourse, as the narrative is around the new technologies and their value for society, while companies are convincing the public of their vision of the metaverse. There is, again, a pessimistic rhetoric coming from the public. For example, this is expressed through a meeting with a local government board, but mostly through media publications that demand immediate response from the government.

Lastly, the third sub-question was concerned with the differences between the two cities' discourses. The analysis has identified six main differences, which are summarised in Table 2 below. The differences in discourses are mainly decided by one specific factor: government presence. As Seoul's government is omnipresent in the discourse, to the same extent is New York's government absent. It results in an open space which companies try to step into, resulting in neoliberal ideologies that prevail.

Moreover, New York's discourse experiences a plurality of meanings attached to the phenomenon, and an overall ambiguity regarding its implications on governance and society. Enough of these meanings exist to conclude the inexistence of one metaverse New York discourse as is present in the South Korean Metaverse Seoul discourse. However, it should be noted that this is most probably due to the government naming its official platform 'Metaverse Seoul'. Similar to each other, both rhetorics are highly techno-optimistic, although Seoul's government frames the metaverse to solve all urban management problems in one package, while New York's discourse scatters solutions to problems around multiple metaverse problems.

Discursive aspect	Metaverse Seoul discourse	Metaverse New York
Metaverse discourse type	**Use discourse**: metaverse Seoul discourse is focussed on the extent of usability for urban life, and to protect its users.	**Structural and technical discourse**: the discourse focuses on its value to society (structural-), as well as the multitude of technologies that create the metaverse experience (technical-).
Key actors	**Seoul Metropolitan Government (SMG)**: dominates and controls the discourse with public communications.	**Variety of corporations**: companies are controlling the discourse with limited government involvement.
Hegemony	**SMG is hegemonic** by prevailing and controlling the discourse, defining the metaverse and (governing) roles clearly.	**No hegemonic actor** exists, as many capitalistic companies compete. Ambiguity exists concerning definitions of the metaverse and its place in society.
Ideological orientation	**Governance and public service delivery oriented** with a focus on freedom and inclusivity.	**Neoliberal and market-value oriented** focussing on the private sector.
Vision on the metaverse	**The new public service paradigm,** which should be fully integrated into Seoul by 2026	**An economic shift** with new opportunities to reach and sell to customers
Techno-optimism	Problem-solving panacea with **one solution to all problems** which is managed by the government itself.	Problem-solving panacea with **many solutions to many problems** managed by many companies with their metaverse platforms

Table 2: Summary of the main differences between the metaverse city discourses of Seoul and New York

5 Conclusion

5.1 Answer to the Main Research Question

Metaverse city discourses are a novel concept, so this research has performed a comparative discourse analysis to expose the implications of the phenomenon. By following the research question '*How can differences in the discourses on metaverse smart city governance in New York and Seoul be explained?*', the analysis has found that the fundamental difference in metaverse city discourse comes from the way in which actors have power under hegemonic discourses. While for Seoul the government controls the discourse with its own 'Metaverse Seoul' platform, New York does not have this hegemony as there is no official platform in the making. The absence of the government in the discourse paves the way for the neoliberal ideologies that Bär et al. (2020) identified as an integral component of smart city discourse, from companies that try to control the metaverse city discourse. It becomes visible that New York's historical context of a financial centre shapes the social outcome of the discourse. At the same time, Seoul's innovative business context with companies like Samsung does not influence the metaverse Seoul Discourse. The Seoul Metropolitan Government actively tries to exclude companies in its public communications and media presence, to safeguard the revolutionary digital public service delivery-oriented ideology that it is pushing towards its citizens. Throughout both discourses is the techno-optimistic view that Park & Yoo (2023) have argued, that the metaverse is seen as the solution to most, if not all, urban management problems. Though, as Seoul's government controls the metaverse space, it adopts a narrative where this one solution is there to fix every problem. The plurality of actors that control the metaverse New York discourse makes such a narrative impossible at this point. As a result, companies are developing their metaverse for one specific problem, whether that problem exists in the eye of the public or not. New York's citizens fear this development, as they are reminded of the power of the Big Tech companies that followed the development of social media platforms.

5.2 Contributions and Suggestions

A knowledge gap was identified considering comparative metaverse city discourse research. This analysis has contributed to the state of the art by filling this knowledge gap with its case-specific findings. Before this research, there was not yet an answer to the question about how, through the process of social shaping that happens through discourses, the metaverse for the use of urban management acquires different meanings between cities, ultimately resulting in different metaverse implementation visions and strategies. Before, smart city discourses have been investigated countlessly. This research on smart city discourses has provided the base for analysing a metaverse city discourse, as the latter is a novel form of the former discourse. Furthermore, this research has contributed to a greater understanding of the phenomenon of the metaverse, especially in urban life. The metaverse seems to be a vague construct which the public does not completely understand. Even more so, the public seems to be unaware of the meaning-making that goes behind it, involving power dynamics that

decide the social outcome. At the same time, researchers, companies, and governmental agencies are highly optimistic about the metaverse replacing a major part of people's lives. Therefore bringing these findings to light is of great importance, to maintain a position wherein there is still room to act and control the shaping.

In contrast to Brand (2005), Allam et al. (2022) and Bibri (2022), this analysis has shown that the smart city discourse is not necessarily in control of elitist and neoliberal powers, as the Metaverse Seoul discourse is characterized by governmental hegemony and the absence of capitalistic forces. Though it is certainly proven, that this finding is not generalizable for any metaverse city discourse. Metaverse New York's discourse is confirming these scholars' theories about the smart city or metaverse discourse. Yet, the power that these rhetorics hold according to Brand (2005), are yet to become clear or more employed in the discourse, as no party is found to be hegemonic in the discourse of New York. Bär et al. (2020) correctly associates the smart city discourse with techno-optimistic rhetorics. The metaverse city ideologies that prevail in both cases are highly oriented towards a vision of the metaverse and its technologies as the problem-solving panacea for urban struggle. Urban public administration and urban life, according to the findings on the discourses, are going to be completely taking place inside the metaverse in the coming decade.

The results are also in line with Bär et al. (2020) in terms of seeing a certain smart city not just as a form of evolution, but that it is shaped by prevailing ideologies, as well as the context in which it takes place. This could largely explain the extreme differences between the two cases, as the social outcomes are completely different, as well as their context. All in all, the results showed a generally positive tone towards the metaverse, as Chen et al. (2024) suggested. At the same time, the discourses showed all the concerns that scholars like Keskin (2018), Bibri (2022) and Allam et al. (2022) have identified previously. Lastly, the results have shown that Dolata and Schwabe's (2023) classifications of metaverse discourses are not completely compatible with metaverse city discourses unless one accepts the coexistence of multiple categories at the same time. An assumption which seems to be inevitable in a pluralistic ideological context as that around the current stage of New York's metaverse city.

Future research could dive deeper into the public understanding of the metaverse for urban management, as the discourse from the public is harder to depict from secondary data where no such investigation is available, resulting in a possible underestimation and misconception of the public's vision and narrative. Next to that, it can be of great value to compare the cases studied in this research, with other comparable cities. It can be very interesting to see whether a city that is more similar in context to New York than Seoul, such as another North American global city, shows a comparable result as New York does. In the same way, Seoul can be compared to another South Asian city. It can expose a clearer answer to influences that shape the metaverse city discourse.

5.3 Implications for Urban Policymakers

If the findings are that the government's presence in the discourse primarily shapes the social outcome, it can be of great importance when it comes to metaverse urban policymaking. The metaverse is currently in its meaning-making and its outcomes are not defined. People experience a feeling of being part of control of the Tech Giants and their data capitalization. Moreover, many suggest this is due to a lack of immediate regulations put on tech companies and their platforms. The government is continuously racing to keep up with technological advancements and this research made clear, that the public is sceptical about the advancements of the metaverse. Some even ask for immediate response to put regulations both in and on the metaverse. This research makes clear that especially in New York, the public is vulnerable to the tech companies that are pushing their metaverse platforms. Moreover, the research has made clear that policymakers should recognize contextual differences and their effects on the metaverse city. Overall, urban policymakers must start regulating the metaverse to ensure the safety of its citizens against tech companies. This entails cooperation between cities, as these metaverse platforms tend to grow beyond the borders of the cities. Municipalities can use the results to develop balanced urban policies, in which the public is protected against hegemonic power, while still fostering innovation to develop and use more efficient urban planning and management.

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7 Appendix

7.1 Appendix I – Dataset

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